

# THE STACK

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(516) 293-8368

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Official Newsletter Of the LONG ISLAND COMPUTER ASSOCIATION, INC.

President, Al Stone

Vice President, Stan Misel

Secretary, Frank Davidoff

Treasurer, Aileen Harrison

Stack Editor, Al Levy

LICA Bulletin Board (516) 561-6590

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## PRESIDENT'S MESSAGE

It is extremely pleasing to witness the demonstrated growth and the obvious maturity that this corporation has achieved. Both our membership and the number of pages in The STACK have doubled since I took office in January, 1982. It is especially pleasing to read the excellent technical articles that are now being submitted to Frank Davidoff and Al Levy with regularity.

Our involvement with the most deserving and compassionate AHRC (Association for the Help of Retarded Children) has strengthened, and we look forward to an improved and expanded "COMPUTER FAIRE #2" on June fourth.

The number of Special Interest Groups continues to expand with the RS Color Computer, PET, NEC, and IBM-PC User Groups leading the recent changes.

We will operate a booth at The New York Computer Show, April 14-17 at Nassau Veteran's Memorial Coliseum. Judging from the records of inquiries received four years ago at the first Hobby Exposition, I anticipate that we will garner quite a few new members at this month's show. Volunteers are still needed to help out - contact Leonard Printz (516) 379-8743.

I am amazed each month as our General Meetings draw excellent speakers both from within, and from outside LICA. Our biggest problems are the tremendous size of the turnouts, and the inexorable flow of time (there never seems to be enough to cover the agenda). Nonetheless, please keep asking for topics of special interest, and keep suggesting speakers of particular expertise.

Remember, LICA is the "umbrella organization" for serious computer users and microcomputer hobbyists in the Nassau and Suffolk County areas of New York. Our influence is much greater than that which our geographic limitations suggest. We continue to be relevant because we are responsive to your stated needs.

If the copy of The STACK which you are reading is your first, or if your membership has expired why not send in your \$12 (\$6 for students) now, and share with us the intellectual adventure and enjoy the tangible benefits of membership?

## A Byte to the Core by Erik Klein

This month I would like to reproduce a report that I have written for the Long Island Math Fair. The topic that I chose to develop was (is) structured programming. The concepts themselves are very hard to develop but harder still is trying to relay them in a clear and concise manner. I tried and hope that I have succeeded.

The ideas that I have developed are not yet fully matured. Any criticism, ideas, or thoughts that you the reader and the computer user, could relay to me, would be appreciated. The comments made are all generalizations, they are not the gospel! Take them lightly but understand their intent.

With the advent of the inexpensive memory chips and the sixteen bit microprocessors, the microcomputer world is in for a startling revolution. The microcomputers that are being introduced today use both of these items to the programmers' advantage by giving them the resources with which they can write organized, structured programs. New machines such as the Apple LISA, the DEC Rainbow 100 and the IBM Personal Computer all contain sixteen bit processors as well as much increased user RAM (random access memory). This increased memory supplies the programmer with enough space to create well written and well structured programs. The processors are important because they can address the large amounts of memory.

Back in the dawn of microcomputer history (all of seven years ago) the computers produced were expensive, slow, and small. They often were limited to less than 8k (1k = 1024 Bytes and 1 byte = 8 bits) of RAM. The BASIC supplied with them was small and not very powerful. The eight bit microprocessors could only address 64k of memory so even fully expanded these machines were limited. The Apple ][+, Atari 800's and their 'family' of computers were vast improvements over the IMSAI's and ALTAIR's of just a few years ago. However, they too, are for the most part still inadequate for the task of processing structured languages. They had larger BASIC's and they even had other languages such as Pascal and micro-FORTRANs but their memory was still limited to 64k per machine. This memory limit forced the programmer to squeeze his code into a 32k workspace. This is a lot, but not enough for structure. The newest micros to hit the market are the best suited, so far, for the 'structured' idea. Before we get into their capabilities, lets first define what a structured program is:

**Structured Program:** Any piece of code that is organized, well documented and easy to read. The ability to return to a six month old program and tell what it was meant to do and the ability of another programmer to follow the code are definite signs.

The program listing #2 illustrates the type of unstructured hard to read code that most programmers entered into their old machines. Program #1, on the other hand, is what I hope to be seeing more of on these new machines. The code is organized, clear, linear and is easy to read. The variables have long descriptive names, are typed and are defined prior to their use. There is also a REMark ('') after every unconditional jump in the program. The code segments are short, well defined and blocked off by REM's. Code is well placed with each line containing as few statements as possible and indentation of decisions and FOR - NEXT loops is present.

## A Byte to the Core by Erik Klein.... continued

The program also shows a linear type of structured coding called 'top down programming'. The main program is just a set of declarations, organizational routines and GOSUB's that put control into the functioning segment or procedure. GOTO's are found rarely, if ever, in a structured program. They are forbidden! The program in listing #2 has short variable names, compressed code and a slightly less organized set of procedures. The code is also totally devoid of REM's. The REMark statements and the long variable names take up large amounts of disk space and memory because they are stored verbatim, whereas the program statements are tokenized. This means that a remark line might take up about 50-80 Bytes of memory while a GOTO or another statement takes up about two Bytes.

This is why memory is so important. The faster processor helps because REM's can slow a program down while adding readability. The previous statements hold true for compiled languages such as Pascal and FORTRAN as well. The source code is larger with comments but the compiler will remove them so that the executable file is about the same size for the same application. This is all well and good but we still have not defined a "structured" program. The following guidelines should help.

- a. Put comments in your program wherever there is the slightest chance that the reader might get confused.
- b. Type all of your variables in the following manner:  
\$ - For Character variables  
# - For Integer variables  
! - For Single Precision Reals
- c. Place a definition segment in the first few lines of your program. These lines should contain the date on which the program was written, the programs author, the function of the program, and a comprehensive list of all of the variables in the program as well as their functions.
- d. Use as few statements per line as possible.
- e. Set off all procedures, moduals or functions with REMark statements.
- f. Mark the end of all procedures with a "procedure end" mark of sorts.
- g. Use some form of linear coding such as the top down type as demonstrated in program #1

The Structured route is not for every programmer or for every program. The hobbyist programmer will probably reject the structured idea and the short quickie program does not need to be structured at all. The guidelines set down are also fairly flexible and do not all have to be used. In general it would be very nice to see more structured programs in this world. I have personally written many programs that I have wanted to update quickly but couldn't because it took too long a time to figure out what I had done.

There are a few comments in this text that could be taken as negative. I hope that you will take some of them with a grain of salt because as I have said, my ideas are as of yet not fully developed. I like the machines that I seem to be putting down. I learned from them and I have enjoyed using them. I like my machine better simply, because it is the one that I happen to own.

Listing #1

```
10 ' Erik Klein 3-10-83 Program #1 // Grades and averages
50 '
60 ' This program will read a list of 60 grades into a
61 ' matrix and it will:
70 '     a. Print a chart of the grades and their recipients
80 '     b. Print the average of all of the grades
90 '     c. Print grades from test #6
100 '    d. Print Grades for "Sandy"
110 '    e. Sort and Print the grades
120 '    f. Print the highest grade.
130 '    g. Print the Average grade.
150 '
160 '          Variables:
180 '          ****
190 '          * ! = Real      *
200 '          * # = Integer   *
210 '          * $ = Character *
220 '          ****
230 '
240 ' GRADE.MAT! -- HOLDS GRADES IN 2D ARRAY
250 ' GRADE.LIST! -- HOLDS GRADES IN LIST
260 ' ROW.IND! -- ROW INDEX FOR READ
270 ' COL.IND! -- COLUMN INDEX FOR READ
280 ' TEST.NUM! -- HOLDS TEST NUMBER
290 ' ROW.PRINT -- INDEX FOR PRINTING ROWS
300 ' COL.PRINT! -- INDEX FOR PRINTING COLUMNS
310 ' COL.6! -- INDEX FOR PRINTING COLUMN SIX GRADES
320 ' NAME.6$ -- HOLDS STUDENT NAME FOR PRINTING
330 ' SANDY.PRINT! -- INDEX TO PRINT SANDIES GRADES
340 ' GET.GRADE! -- HOLDS GRADES PENDING STORAGE IN GRADE.LIST!
350 ' OUTER! -- OUTER LOOP INDEX IN SORT
360 ' INNER! -- INNER LOOP INDEX IN SORT
370 ' SORT.PRINT! -- INDEX IN LOOP TO PRINT SORTED VARIABLES
380 ' COMPUTE.AVG! -- INDEX FOR AVERAGE LOOP
390 ' SUM! -- SUM OF ALL GRADES
400 ' AVERAGE.GRADE! -- HOLDS THE AVERAGE GRADE
410 ' STUDENT.NAME$ -- HOLDS THE STUDENTS NAME PENDING PRINTING
420 '
430 CLS 'Clear Screen
440 '
450 DIM GRADE.MAT!(5,12),GRADE.LIST!(60)
460 '
470 GOSUB 640  '** Read Grades into GRADE.MAT
480 GOSUB 770  '** Print Out Chart of Grades and Students
490 GOSUB 970  '** Print Grades for Test #6
500 GOSUB 1170  '** Print "Sandies" Grades
510 GOSUB 1320  '** Read Grades into GRADE.LIST
520 GOSUB 1440  '** Sort Grades in GRADE.LIST
530 GOSUB 1570  '** Print Sorted List
540 GOSUB 1710  '** Print Highest Grade
550 GOSUB 1820  '** Print Average Grade
560 '
580 END
```

```

590 **** Main Ends // Subroutines Begin ****
600 *
610 ****
620 '
630 '
640 *** Procedure to read grades into GRADE.MAT ***
650 '
660 FOR ROW.IND! = 1 TO 5
670   FOR COL.IND! = 1 TO 12
680     READ GRADE.MAT!(ROW.IND!,COL.IND!)
690   NEXT COL.IND!
700 NEXT ROW.IND!
710 RETURN
720 *** [ END OF PROCEDURE ] ***
730 '
740 '
750 *** Procedure to print out table of grades ***
760 '
770 PRINT TAB( 8 );
780 FOR TEST.NUM! = 1 TO 12
790   PRINT TEST.NUM!;" ";
800   IF TEST.NUM! < 10 THEN PRINT " ";
810 NEXT TEST.NUM!
820 PRINT
830 FOR ROW.PRINT! = 1 TO 5
840   READ STUDENT.NAMES
850   PRINT
860   PRINT STUDENT.NAME$;
870   PRINT TAB( 8 );
880   FOR COL.PRINT! = 1 TO 12
890     PRINT GRADE.MAT!(ROW.PRINT!,COL.PRINT!);" ";
900   NEXT COL.PRINT!
910 NEXT ROW.PRINT!
920 RETURN
930 '
940 *** [ END OF PROCEDURE ] ***
950 '
960 '
970 *** Procedure to print grades from test #6 ***
980 '
990 PRINT
1000 PRINT
1010 PRINT "-----> Grades for the Sixth Test <-----"
1020 PRINT
1030 RESTORE 2010
1040 'Restore names data
1050 FOR COL.6! = 1 TO 5
1060   READ NAME.6$
1070   PRINT NAME.6$;
1080   PRINT TAB( 20 );GRADE.MAT!(COL.6!,6)
1090 NEXT COL.6!
1100 PRINT
1110 PRINT
1120 RETURN
1130 '
1140 *** [ END OF PROCEDURE ] ***

```

```

1170 '*** Procedure to Print Sandies Grades ***
1180 '
1190 PRINT "-----> Sandies Grades <-----"
1200 PRINT
1210 PRINT "Sandy ";
1220 FOR SANDY.PRINT! = 1 TO 12
1230   PRINT GRADE.MAT!(3,SANDY.PRINT!);" ";
1240 NEXT SANDY.PRINT!
1250 PRINT
1260 PRINT
1270 RETURN
1280 '
1290 '*** [ END OF PROCEDURE ] ***
1300 '
1310 '
1320 '*** Procedure to Read Grades into GRADE.LIST
1330 '
1340 RESTORE
1350 'Restore all Data
1360 FOR GET.GRADE! = 1 TO 60
1370   READ GRADE.LIST!(GET.GRADE!)
1380 NEXT GET.GRADE!
1390 RETURN
1400 '
1410 '*** [ END OF PROCEDURE ] ***
1420 '
1430 '
1440 '** Bubble Sort to Put GRADE.LIST into Numerical Order **
1450 '
1460 FOR OUTER! = 1 TO 59
1470   FOR INNER! = OUTER!+1 TO 60
1480     IF GRADE.LIST!(OUTER!) > GRADE.LIST!(INNER!) THEN 1500
1490     SWAP GRADE.LIST!(INNER!),GRADE.LIST!(OUTER!)
1500   NEXT INNER!
1510 NEXT OUTER!
1520 RETURN
1530 '
1540 '*** [ END OF PROCEDURE ] ***
1550 '
1560 '
1570 '* Procedure to Print Sorted List of Grades [GRADE.LIST] *
1580 '
1590 PRINT "-----> Sorted List of Grades <-----"
1600 PRINT
1610 FOR SORT.PRINT! = 1 TO 60
1620   PRINT GRADE.LIST!(SORT.PRINT!);" ";
1630 NEXT SORT.PRINT!
1640 PRINT
1650 PRINT
1660 RETURN
1670 '
1680 '*** [ END OF PROCEDURE ] ***
1690 '
1710 '*** Print Highest Grade ***
1720 PRINT "-----> Highest Grade <-----"
1730 PRINT
1740 PRINT GRADE.LIST!(1)
1750 PRINT
1760 PRINT
1770 RETURN
1790 '*** [ END OF PROCEDURE ] ***

```

```

1820 *** Compute and Print the Average Grade ***
1830
1840 FOR COMPUTE.AVG! = 1 TO 60
1850  SUM! = SUM! + GRADE.LIST! (COMPUTE.AVG!)
1860 NEXT COMPUTE.AVG!
1870 AVERAGE.GRADE! = SUM! / 60
1880 PRINT "-----> Average Grade <-----"
1890 PRINT
1900 PRINT AVERAGE.GRADE!
1910 RETURN
1920
1930 *** [ END OF PROCEDURE ] ***
1940
1950
1960 DATA 75,80,90,72,65,83,75,65,83,40,90,95
1970 DATA 82,74,88,97,66,73,98,89,76,43,72,88
1980 DATA 60,42,55,87,82,90,97,63,85,88,75,64
1990 DATA 58,35,70,70,86,50,80,60,78,91,89,80
2000 DATA 43,58,80,95,90,90,70,80,84,93,72,60
2010 DATA"John","Mary","Sandy","Lou","Frank"

```

### Listing #2

```

410 CLS:DIM G(5,12),GL(60):GOSUB 620:GOSUB 750:GOSUB 950
411 GOSUB 1150:GOSUB 1300:GOSUB 1420:GOSUB 1550:GOSUB 1690
412 GOSUB 1800:END
620 FOR RD=1 TO 5:FOR CD=1 TO 12:READ G(RD,CD):NEXT CD
621 NEXT RD:621:RETURN
750 PRINT TAB(8);:FOR TM=1 TO 12:PRINT TM;" ";
751 IF TM<10 THEN PRINT" ";
790 NEXT TM:PRINT:FOR RP=1 TO 5:READ SS:PRINT:PRINT SS;
791 PRINT TAB(8);:FOR CT=1 TO 12:PRINT G(RP,CT);" ";
792 NEXT CT:NEXT RP:RETURN
950 PRINT:PRINT
951 PRINT"-----> Grades for the Sixth Test <-----"
952 PRINT:RESTORE 1990:FOR C6=1 TO 5
953 READ N6$:PRINT N6$;:PRINT TAB(20);G(C6,6):NEXT C6:PRINT
954 PRINT:RETURN
1150 PRINT"-----> Sandies Grades <-----":PRINT
1151 PRINT"Sandy ";:FOR SN=1 TO 12:PRINT G(3,SN);" ";
1152 NEXT SN:PRINT:PRINT:RETURN
1300 RESTORE:FOR GG=1 TO 60:READ GL(GG):NEXT GG:RETURN
1420 FOR O=1 TO 59:FOR I=O+1 TO 60:IF GL(O)>GL(I)THEN 1480
1470 SWAP GL(I),GL(O)
1480 NEXT I:NEXT O:RETURN
1550 PRINT"-----> Sorted List of Grades <-----"
1551 PRINT:FOR SO=1 TO 60:PRINT GL(SO);" ";:NEXT SO
1552 PRINT:PRINT:RETURN
1690 PRINT"-----> Highest Grade <-----":PRINT
1691 PRINT GL(1):PRINT:PRINT:RETURN
1800 FOR CG=1 TO 60:M=M+GL(CG):NEXT CG:A=M/60
1801 PRINT"-----> Average Grade <-----":PRINT
1802 PRINT A:RETURN
1940 DATA 75,80,90,72,65,83,75,65,83,40,90,95
1950 DATA 82,74,88,97,66,73,98,89,76,43,72,88
1960 DATA 60,42,55,87,82,90,97,63,85,88,75,64
1970 DATA 58,35,70,70,86,50,80,60,78,91,89,80
1980 DATA 43,58,80,95,90,90,70,80,84,93,72,60
1990 DATA"John","Mary","Sandy","Lou","Frank"

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**SECRETARY'S REPORT ON LICA MEETING OF 18 MARCH 1983**  
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ANNOUNCEMENTS AND REPORTS

There will be a NY Computer Show at the Nassau Coliseum in Uniondale from 14-17 April.

The Trenton Flea Market will take place on 16-17 April.

**Dave Schwartz** discussed Gemini printers. They are similar to Epson but with more features.

**Jack Altman**, publisher of Computer and Video Marketing magazine, will publish a one page free ad for LICA and will sell the magazine for 50 cents at the LICA meetings.

**Al Stone**, the president, emphasized the advantages of being a LICA member:

Subscription to the Stack newsletter.  
Opportunity to regularly hear informative speakers.  
Contact with other knowledgeable computer enthusiasts.  
Free raffles.

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**Dave Minott discussed new products**  
\*\*\*\*\*

**TRANSFORM** (\$29.95) is a structured preprocessor for Basic. It supports local and global variables and the use of labels; line numbers may be omitted. The documentation is a good tutorial on structured programming.

**NEVADA PILOT** (\$29.95) is designed for writing programs for testing students.

**Phil Cochems** reported briefly on the status of the LICA Fair to be held on Saturday, 4 June.

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**STEVE PERRY - PREVENTION AND REPAIR OF COMPUTER SYSTEM FAILURES**  
\*\*\*\*\*

Steve, a LICA member, has wide computer experience and runs his own computer repair business. His useful and informative talk is summarized below.

Purpose: Limit system downtime and repair costs.

Emphasis: Preventive maintenance.

Advance preparation.

What to do when failures occur.

.....continued on next page 9

## SECRETARY'S REPORT (Continued)

Preventive maintenance: What to do?  
Cleaning  
Lubrication

Visually check for loose connections, signs of overheating and pinched cables.

Advance preparation:

Build a service file on your equipment.  
Obtain diagnostic software and typical algorithms.  
Know the response of your system when it is working properly.  
Keep spare parts handy: Fuses of correct rating.  
IC's (only if socketed). Obtain  
schematics, component locations, service manual  
and modification notes.

When failures occur:

1. What happened? What were you doing? Were you able to recover? Is it repeatable? What is the nature of the failure?
  2. Investigate. Start with the simple and obvious. Proceed to more complex possibilities. Use a divide and conquer approach. Take notes of what you did.
  3. Getting professional help.
    - a. Take or ship only the defective module.
    - b. Include service file, observations and modification notes.
    - c. Advise of any modifications by manufacturer.
    - d. Advise of any modifications that you made.
    - e. Get an estimate of cost and delivery time.
    - f. Establish a not-to-be-exceeded price.
    - g. Provide work and home phone numbers and when and where to call.
    - h. Pack properly for shipment.
- - - - -

**BI-TECH Enterprises** of Bohemia demonstrated an Epson Model QX-10 Computer. It uses a Z-80A microprocessor running at 4 MHz. It comes with 64K RAM expandable to 256K, 2K RAM with battery backup and bank select facilities. Two 5 1/4 double-sided drives each with 340K capacity; the controller has DMA capability. The 12" green monitor has high resolution graphics capability driven by an NEC 7220 graphic display controller.

The basic computer with CPM is \$2499. An enhanced model with a special keyboard having many dedicated special function keys, special VALDOCS word-processor etc etc software, and 256K of RAM is \$2995.

Also demonstrated was an Epson Model HX20 portable computer with a bar code reader; also a TRS80 with a hard disk.

Frank Davidoff, Secretary

Using The LICA Bulletin Board System - Al Levy

At the request of many LICA members, I have written a user's guide to the LICA CBBS(R). All of the usages and prompts from the bulletin board have been downloaded to demonstrate exact screen displays to save words of explanation. If you have questions, please submit them to me. I may not be clear, and other members may share your confusion. This issue of the STACK contains the first steps. Each succeeding issue will continue the adventure through modemland.

My assumption is that you are a first time user. Since I have had some pretty weird experiences with people, their expectations and modems, I will walk through the procedure one step at a time. THING will be omitted. This is tedious but at some point some member might need the reference. Since the Bulletin Board is in ANSWER mode you should set your modem to ORIGINATE mode. You should be in FULL DUPLEX with no echo.

1st: dial (516) 561-6590

The phone rings, the CBBS(R) answers and you should hear a bleep... This is a response tone. You must now acknowledge the sound by sending a carrier tone from your computer/modem setup. This is not done by hitting carriage returns.

2nd: According to the protocols set by the manufacturer of your modem, send an originate (carrier tone) to the bulletin board.

3rd: Listen for tones going both ways, the sounds are quite distinct. If you hear two signals on the phone, it is time to start hitting some carriage returns. On some computers this is the ENTER key. No sense getting panic struck, five or six times should be enough.

If nothing happens go back to step 3.

If you have started from step 3 more than once and not had success, go back to step 1  
dial (516) 561-6590

If you did succeed, you will see the following screen displays.

CBBS(R) VER 3.3  
LAST LICA MOD - 5/23/82  
04/05/83 22:56:46

XXX WELCOME TO CBBS(R) / LONG ISLAND XXX

TERMINAL NEED NULLS ? TYPE "N" WHILE THIS TYPES:

CBBS(R) / LONG ISLAND HAS ESTABLISHED AND IS MAINTAINED  
BY THE MEMBERS OF THE LONG ISLAND COMPUTER ASSOCIATION INC.

(LICA)

DIRECT ANY QUESTIONS, COMMENTS, CRITICISMS, OR SUGGESTIONS TO:

HARVEY FISHMAN (212) 258-7276 (8:00 - 10:30 PM EST)

- OR -

DAVE MINOTT (516) 825-2282 (ANY TIME - RECORDER)

CONTROL CHARACTERS ACCEPTED BY THIS SYSTEM:

<<<\*\*\* TO SKIP WELCOME, HIT CONTROL-C OR C \*\*\*>>>

ASCII CHARS	CTL CHARS	
	DELS	CHARACTER DELETE
C	C	CANCEL OUTPUT
K	K	FUNCTION ABORT
N	N	START SENDING 5 NULLS
R	R	RETYPES INPUT LINE
S	S	SUSPEND OUTPUT
U	U	LINE DELETE

IF YOU GET STUCK, TRY: CTL-K OR K THEN C/R UNTIL YOU BAIL OUT BACK TO THE MAIN MENU.  
WHENEVER WE REFER TO "C/R", WE MEAN YOUR "RETURN" OR YOUR "ENTER" KEY!!!

----> PRESS "S" TO STOP OUTPUT, "S" TO START IT AGAIN <----  
(NO DATA WILL BE LOST)

"FRILLS": CTL-W RETYPES WORD  
CTL-L SHOWS WHAT COLUMN YOU ARE IN.

IN COMMAND MODE, ENTER THE V(IDEO) COMMAND. THIS WILL ALLOW DISPLAYS THAT RESPOND TO CONTROL-H TO PHYSICALLY BACKSPACE OVER DELETIONS.

LICA/CBBS SUPPORTS DOWNLOADING. USE THE 'F' COMMAND.

NOTE: IN MOST CASES YOU WON'T HAVE TO USE THE CONTROL KEY.

TYPE CONTROL-C TO SKIP BULLETINS

Bulletins updated March 20, 1883

I-->\*\*\* The second annual L.I.C.A. flea market will take place on June 4, 1983 from 9 AM to 5 PM at The Association for the Help of Retarded Children 115 E. Bethpage Road Plainview, N.Y. For further information call: Al Levy (516) 293-8368

1-->\*\*\* The Trenton Computer Festival will be held on April 16 and 17 at the Trenton State Teachers College, Trenton, N.J.

1-->\*\*\* The next meeting of the Long Island Computer Association will take place on April 15, 1983 at the New York Institute of Technology, Building 500 at 8:00 PM.

!->\*\*\* The next 8080/S-100 Sub-group meeting will take place on April 8, 1983 at the New York Institute of Technology, Building 500 at 8:00 P.M.

1-->\*\*\* The next TRS-80 Sub-group meeting is April 8 at the New York Institute Of Technology, Building 500 at 7:00 P.M.

-->\*\*\* Directions to the New York Institute of Technology (courtesy of Al Levy)

		N
Northern Blvd.		(25A) W<-----*
		S
G	+N+ C.W. POST +	R
I	+Y+ College +	o
l	+ +-----	u
e	+ +	t
n	+n+	e
C	+s+	1
o	+t+	0
v	+ +	7
e	+ot	
R	+ft	
d	+ +	
*	+T+	
	+et	
	+ct	
	+ht	
	+ +-----	
*****	+	+
*	+	+
*****	+	+
*****	+ Parking	+
*	+	+
500 bldg *	+ Lot	+
*****	+	+
	+ Dead End	+

Y/N: IS THIS YOUR FIRST TIME ON THE SYSTEM?

## Micro Thoughts - Al Levy

Last time I talked about HEADER records in a data file. My kicks come from taking an idea and expanding it to its logical conclusion. As a result I decided to put more information into the header than the number of entries and the next available record. One thing led to another and soon I was leaving the last date the file was updated plus other information in the header. Before long I was using more than one "header" in the data file. At some point I decided to include the following information in the header records such as: TOTAL NUMBER OF RECORD - NEXT AVAILABLE ENTRY - NUMBER OF FIELDS - CHARACTERS PER FIELD - NUMBER OF PROMPTS FOR USER - NUMBER OF CHARACTERS PER PROMPT - PROMPTS

Lets analyze this much. Assuming you are writing a Mailing List which allows for 500 names and addresses. You want to have (4) four fields. Let us say that the first field is a spare for 4 line addresses (c/o types), the second is for the name, the third is for the street address, and the last is for the city state and zip code.

The first field name is "SPARE" and you want to allow 30 characters for the field. The second field name is "NAME" and you want to allow 30 characters for the field. The third field name is "ADDRESS" and you want to allow 30 characters for the field. The last field name is "CITY / STATE / ZIP" and you want to allow 30 characters for the field.

For the person who does not recognize the terminology. A record in computer talk is similar to a line of information on a typewritten page. It is usually defined by a carriage return. A field is the space which holds particular information within the record. For example:

NAME	ADDRESS	ZIP
GOMEZ, ALFRED	50 GONZOLO STREET	90876

The record starts with GOMEZ and ends with 90876. The first field contains GOMEZ, ALFRED. The second field contains 50 GONZOLO STREET and the last field contains 90876. There!

If I were to have all of the necessary information in the header for the above mentioned mailing list, the header record would contain the following info:

total	next available	fields	prompts	cpf1	cpf2	cpf3	cpf4	cpp1	cpp2	cpp3	cpp4	
500	1	002	004	004	030	030	030	030	005	004	007	018

For the curious, cpf1= characters per field #1

cpp1= characters per prompt #1

So, the header will appear as follows:

=====

500 002 004 004 030 030 030 005 004 007 018 SPARE NAME ADDRESS CITY / STATE / ZIP

=====

500 RECORDS AVAILABLE

START ENTERING INFORMATION IN RECORD #2 (#1 is used for header)

THERE ARE 4 FIELDS FOR EACH RECORD

THERE ARE FOUR PROMPTS USED ( One for each field )

THE FIRST FIELD ALLOWS FOR 30 CHARACTERS

THE SECOND FIELD ALLOWS FOR 30 CHARACTERS

THE THIRD FIELD ALLOWS FOR 30 CHARACTERS

THE LAST FIELD ALLOWS FOR 30 CHARACTERS

THE 1ST PROMPT HAS 5 CHARACTERS

THE 2ND PROMPT HAS 4 CHARACTERS

THE 3RD PROMPT HAS 7 CHARACTERS

THE 4TH PROMPT HAS 18 CHARACTERS

THE 1ST PROMPT IS "SPARE"

THE 2ND PROMPT IS "NAME"

THE 3RD PROMPT IS "ADDRESS"

THE 4TH PROMPT IS "CITY / STATE / ZIP"

Is this useful? Is it trite? Well, its a beginning and you aint heard nothin yet.

I am glad to report that all of our members now belong to LICA. Since no information has been received regarding other systems, this column will be used for two purposes temporarily. (1) To report on activities of the Poly group and (2) to report to LICA members the features, advantages and disadvantages of this "vintage" system.

We all hope that Sam Rosenfeld will soon recuperate from his recent heart attack. A member of LICA for just two months, Sam was already doing his share by collating, stapling and helping with the STACK as well as collecting dues at the general meeting. GET WELL SAM, we miss you.

At our second meeting we discussed SYSTEM commands. In some systems these are called resident commands. Most system commands can be abbreviated to one or two letters. Last time we discussed LIST or L. LIST defaults to the system drive if none is specified. To specify a drive the number is typed after a space such as L 5. This will list all files on disk drive 5. Upper/Lower case is not important, L 5 works as well.

INITIALIZE or INIT formats a disk to Poly Format. It works as follows: The user types INIT, PROMPT "which drive?", RESPONSE 2. It takes about 11 seconds for a 5" and about 20 seconds for DSDD 8" disk to be formatted. If you try to INIT the system disk Poly responds "I can't INIT a system disk." INITING a system disk is done by using on some other drive.

IMAGE or IM is used to completely copy from one disk to another. The dialogue follows: IM "from which drive" 1 "to which drive" 3 "working....." It takes about the same time as INIT. The transfer rate for a 5" SSSD disk is 125,000 bits/sec. 5" DSDD is twice as fast and 8" DSDD is 8 times faster. IMAGE will allow you to take out the system disk, Image from the system resident drive to any other and when the copy is complete the request is made to "replace the system disk and hit a C/R".

TYPE as in most computers means "display on the screen what ever is in the file." T is the abbreviation for type. T Stack would display the current edition of the STACK on the screen. Control S is not used to pause the screen display. The display pauses after each page is displayed. It can be scrolled backwards or slowed down using alternate commands. Hitting any key will cause the next page to be displayed.

PRINT or PR will print the file specified. PR Stack will print the STACK on the printer. Any device including the screen may easily be defined as the printer. Since Poly has a universal printer driver installation of a new printer is not much fuss.

DL puts on the video screen all the "deleted" file names for a particular disk. DIRECTORY or DIR will send the directory to the printer much as LIST sends it to the screen.

PAGE will set the printer Top Of Page Function or clear the screen if it is the default printer.

RENAME or REN is used to rename a file. The syntax is REN Stack STACK. Extensions need not be included. To change an extension while specifying some drive other than the system drive

REN <3>STACK.TX <3>STACK.BB

COPY or COP is used to copy files. The syntax is COP STACK <2>BACKUP. The first named is the from file.

DELETE or DEL will delete a file. UNDELETE or UNDE will undelete a file.

PACK or PAC will clean off all deleted files and make room.

DNAME or DN allows the user to name a disk. This is not a dummy file. Each disk has a real name.

GET places a machine language program into RAM.

START starts the program in memory.

SAVE saves memory location on a disk. A file name must be given.

ZAP zeros all of user memory.

"Sniff" checks a disk for "bad sectors"

EDIT opens a file for editing.

The more esoteric commands will be saved for a later meeting as will sub-directories. It should be mentioned that commands can be combined such as ZP means ZAP and PACK and ZC = ZAP and COPY etc. Among the more interesting resident commands not yet discussed are CON and REENTER.

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NOTICES AND REPORTS  
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PCUGB - Our next meeting will be on April 8th at 7:30 at the NYIT, Commack Branch. Our main speaker at our next meeting will be from dBasett. Is there any defense adequate for non support?

S/100 no report

TRS no report

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APRIL 14-17	NEW YORK COMPUTER SHOW	NASSAU COLISEUM
APRIL 16-17	TRENTON FLEA MARKET	
MAY 22	LIMARC	
JUNE 4	LICA FAIRE at AHRC	

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Next month we will be reprinting an article by Frank Stearns, a respected consultant from the state of Washington. The article deals with the care and maintenance of Shugart 5 inch drives. This report is thorough and written in layman's language. Mr. Stearns has kindly consented to sending me a disk with a few of his already published reports.

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\* dBASE II course \*  
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LICA is sponsoring a dBASE II course to be given by BOB KOWITT. This will take place some time in May, the exact date to be decided. Cost of the course is \$30 with the proceeds going to LICA. The enrollment is limited! For details contact AL STONE (phone numbers listed below) or LESTER LUTZKER at (516) 621-7780

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We are still looking for volunteers for both the LICA FAIRE and to man the booth at the Nassau Coliseum for the New York Computer Show. Volunteers are urged to call LEONARD PRINTZ with regards to the NY COMPUTER SHOW (516) 379-8743. Volunteers for the LICA FAIRE are urged to call PHIL COCHEMS at (516) 333-4213.

If you have problems reaching either of these members try calling AL STONE at (516) 731-1649 or (516) 731-7796, or AL LEVY at (516) 293-8368.

We need people to distribute flyers, contact dealers, help with publicity, work at the FAIRE etc. This is an important project. If you intend to help, call now. Much of the work is already under way. We are looking for new product dealers for the indoor displays, lecturers for seminars, people to man the LICA table to help the public, vendors for the outdoor area. Mention the FAIRE to all of your friends, call Bulletin Boards, write to computer magazines. At worst we will duplicate each others moves and this will only reinforce the momentum.

**Long Island Computer Association, Inc. - Special Interest Groups**

SUB-GROUP	CHAIRMEN	PHONE (516)	Meetings Each Month
6502	Steve Perry	744-6462	
680X	Roger Kaucher	796-8746	
IBM	Marvin Freifeld	724-0574	2nd Friday 7:00
Commodore	Phil Cochems	333-4213	3rd Friday 7:00
PolyMorphic	Al Levy	293-8368	3rd Friday 7:00
S-100	Richard Wilson	747-4241	2nd Friday 7:30
TRS-80	Ed Zulikowski	938-3320	2nd Friday 7:00
N o w F o r m i n g			
Color Computer	S. Perry Jenkins	Box 62 Southampton NY	11968
NEC PC-8000	Jerry Worthing	735-2952	
Apple UG	Looking For Chair-person	Call Al Levy	

**MONTHLY MEETINGS**

All meetings, except IBM PC/UG and 6800 UG are held at the New York Institute of Technology, Old Westbury Campus. LICA meets each month on the third Friday evening at 8:00 in Room 508, Building 500. See the back cover of the Stack for map and directions. Our next general meeting will be held on the 15th of April.

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**The Stack is now available at the following locations**

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BI-Tech Enterprises Inc.	108 Carlough Road	Bohemia
Compu-Aid	222-68 Braddock Avenue	Queens Village
Computerifics	14 Cold Spring Road	Syosset
ComputerLand	79 Westbury Avenue	Carle Place
Computerland	6181 Jericho Turnpike	Commack
Computer Learning Center	78 Wolver Hollow Road	Brookville
Computer Microsystems	1196 Northern Blvd	Manhasset
Cousins Video	1238 Hicksville Road	Massapequa
Future Visions	70 Broad Hollow Road	Melville
Harrison Computer Center	2263 Broadhollow Road	E Farmingdale
Interlogic Computer Center	117 Broadway	Hicksville
LI Computer General Store	103 Atlantic Avenue	Lynbrook
Programs Unlimited	20A Jericho Turnpike	Jericho
Programs Unlimited	Smithtown Mall	Smithtown
Programs Unlimited	5002 Jericho Turnpike	Commack
Software Emporium	151 Mineola/Willis Avenue	Roslyn Hghts
Spartan Electronics	6094 Jericho Turnpike	Commack
The Computer Touch	709 Route 110	Melville
Tri County Flea Market	3041 Hempstead Tpke (2nd Floor)	Levittown
World Computers	247 Old Country Road	Hicksville

**COMMERCIAL ADVERTISING POLICY:**

In an effort to cover our costs of duplication and mailing, and to provide a more extensive monthly edition of THE STACK, commercial display ads are accepted in 1/4 1/2 and Full Page sizes. Minimum participation is for three months. The three month rates are \$50, \$75, and \$125 respectively. Copy need not be the same each month. Camera ready preferably. Type setting & layout work available at additional charge. **All checks should be made payable to LICA.**

The Long Island Computer Association, INC. is open to everyone, amateur or professional with an interest in computers, computer applications, programming, or related subjects. Dues are \$12.00 per year which includes monthly issues of this publication. The STACK is mailed to other computer clubs on an exchange basis as well as to various technical publishers. Permission for reprinting or quoting items in The STACK is granted providing that credit is given & a copy of the reprint is sent to The STACK. Members can vote in club elections, & place non-commercial classified ads(at no charge) and commercial ads at nominal cost. Member articles and other data affecting The STACK must be received by the 15th day of any month, to be published in the following issue. All copy should be sent to: Al Levy P.O.Box 71 Hicksville N.Y. 11802 (516) 293-8368

CLASSIFIED ADS

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**CAD TOOLS**: Anyone interested in CAD tools for personal computers? We offer schematic entry, verification, component placement, autorouting, NC photo/pen plotting. NC Design, 58 Hillside Ave, Williston Park, NY 11596 Phone: (212) 358-8764.

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**11 X 15 (2 PART) CONTINUOUS FORM PAPER**: Limited quantity, first come first served. Just \$20 per carton, \$15 per carton to LICA members. Paper has a company logo in lower right hand corner. Good for rough copies and "in house" printouts. Call Al Levy (516) 293-8368

**IBM SYSTEM/38 PROGRAMMERS**: An Exceptional opportunity to join a dynamic young Data Processing Firm. Excellent salary and benefits. If you have over two years experience in programming preferably on an IBM/38 using COBOL give us a call at (516) 293-0144 or send resume to The Wheatly Group, Ltd. 425 Broad Hollow Road Melville, NY 11747

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NEXT ISSUE

USE THIS SPACE

TO PLACE YOUR AD

All classified ads will be removed after they have been published for three consecutive issues. The reason for this, members do not notify us when items have been sold etc and some ads have run in an infinite loop. If you wish your FREE ad to be continued, the copy must be submitted either in writing or via modem and it must be dated. Commercial ads will of course, be published for the paid period of time.



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